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Finding Them Was the Easy Part

Making Sense of Historic Mine Sites on the Last Frontier

The National Park Service Alaska Region is preparing to release *The Quest for Gold*, an overview of inventory work on historic mining sites in the Alaska national parks. The report, being compiled by Becky Saleeby, summarizes and analyzes 10 years of fieldwork conducted in nine parks between 1986 and 1996. *The Quest for Gold* will close a highly productive chapter in the identification and management of cultural resources in Alaska, an effort which establishes substantial foundations for continuing research on historic mining sites. No small task.

Over the 10-year period, 40 different archeologists, historical architects, and historians working with the Cultural Resources Mining Inventory and Monitoring Program surveyed well over 44,000 acres and recorded 345 discrete sites. Logistical concerns made for interesting fieldwork. Access alone was not a simple consideration. There are few roads in Alaska. Survey parties spent hundreds of hours in small aircraft. On the ground, they worked in a wide range of situations. They climbed mountains, waded through swamps, and became intimately familiar with all manner of dense vegetation including devil's club and alder thickets. The rewards were often great: beautiful sunsets in remote and unfamiliar landscapes and the pleasant problem of working in a landscape so complex and cluttered with mining features and artifacts that one literally did not know where to begin.

The program served several masters and provided a wide range of information to park managers. Initially, the work was done to comply with court orders, contribute to the writing of three major environmental impact statements on mining in the parks, and facilitate the administration of the Mining in the Parks Act. Given the relative youth of most national parks in Alaska, the program soon began to perform basic inventory functions and to identify and assess historic sites on abandoned mine lands as well. The program did not have the luxury of collecting and analyzing information prior to making recommendations to park management. Managing mine lands and making sense of the associated historic sites was a complex and often contentious issue from the first.

Scope of the Problem

Alaska possesses a rich mining history. Native Alaskans have recovered and traded copper for at least a thousand years. The Russians mined a little coal in the 1850s. Prospectors from California and a hundred other gold fields worked their way north in the 1870s and 1880s culminating in the great northern gold rushes: the Klondike, Nome, Fairbanks, and a hundred other placers large and small. Thereafter, mining became a constant in the life of the north. Small-scale placer mining employing relatively primitive methods coexisted with the larger industrial mining operations employing dredges and other capital intensive mining techniques. Hard rock mines have operated in Alaska since the 1870s, some small, some large, some phenomenally rich. Only in recent years has mining and fishing been overshadowed by the phenomenal growth of the oil industry based on Prudhoe Bay and the North Slope.

Well over a hundred years of mining activity has left its mark on the land. Scratch apparent pristine wilderness and evidence of mining frequently appears. The new parks and park expansions established in 1980 by the Alaska National Interest Lands Conservation Act brought several historic mining areas under National Park Service administration. Wrangell-St. Elias National Park and Preserve— the largest single unit in the national park system at more than 13 million acres—encompasses five significant historic mining districts representing three gold rushes and the Alaska Copper Belt centered on the Kennecott mines. The transformation and expansion of Mt. McKinley into Denali National Park and Preserve took in the Kantisha mining district, another gold rush locale. Gold rush sites and history on the Yukon River were defining elements in the creation of the Yukon-Charley Rivers National Preserve. Gates of the Arctic National Park and Preserve borders on the Koyukuk mining district, the focus of one of the northern-most gold rushes. Kenai Fjords National Park contains a hard-rock gold district centered on Nuka Bay. Klondike Gold Rush National Historic Park commemorates the "Days of '98." It is the rare park in Alaska that does not

contain some historic mine lands or address mining as a multi-faceted management issue.

The Alaska National Interest Lands Conservation Act closed the newly created park lands to appropriation and disposal under the mining laws—subject to existing valid rights. As one result, historic mining lands and the historic sites contained therein were frequently, if not usually, located on mining claims, patented and unpatented. In 1988, when the inventory program was in its third year of operation, there were 1,650 active claims in the parks; 923 were in Wrangell-St. Elias and 428 in Denali. These active claims covered approximately 33,000 acres. An even larger area, nearly 60,000 acres, was defined as abandoned mine lands.

Historic mining sites in the Alaska parks are difficult to manage. Confirming their existence and assessing them is something more than an academic exercise. They are more than just resources on the land. Mine lands are often the focus of intense competing interests. When historic sites are located on active mining claims, they need to be considered and possibly protected as part of the permitting process. Mining is permitted on valid claims within the national parks in Alaska subject to approval of the mining plan of operations. Review of the plan involves an assessment of the effects of the proposal on natural and cultural resources. Compliance with Section 106 of the National Historic Preservation Act is a major element in the process.

Frequently, historic mining sites are contaminated sites. Hazards abound from rusty metal to abandoned explosives. Often there is a direct correlation between the degree of historic significance and the level of contamination. Historic placer mining employed mercury, sometimes in large quantities. More recent placer mining activities are usually mechanized, creating numerous opportunities for petroleum contamination. Lode mines were frequently industrial undertakings characteristic of the early-20th century with all that implies in terms of hazardous wastes and environmental disturbances. Mining leaves obvious marks on the land, which some see as historic resources and others see as damaged lands requiring mitigation.

Placer mining was a labor intensive undertaking. At least seven men are involved in preparing for a clean-up on Chititu Creek in this 1908 photo. Note the electric lights which allowed around-the-clock operations during the brief summer months. (S.R. Capps, No. 168, U.S. Geological Survey.)

The ownership of historic resources on mine lands is a recurring concern. Patented mining claims are private property. Unpatented mining claims, while conveying something less than fee simple title, gives the holder the right to extract the minerals and the use of surface areas to facilitate mining with certain restrictions. Resource protection and management is difficult under such conditions. Accordingly, there has been a regular acquisition program for mining properties in Alaska for some time. Recently, a legislative taking was authorized for Denali National Park and Preserve to facilitate the acquisition process.

The isolation that has long protected many historic mining sites is evaporating. Many of the sites are located in parks that are experiencing a dramatic increase in visitation. Often the mining sites are the attraction. The Kennecott mine complex is one reason, among many, why people around the world come to Wrangell-St. Elias. While there may be few roads in the Alaskan parks and preserves, air strips abound and small airplanes are plentiful. How to protect these resources, while making them available to the visiting public in a rational manner, is a constant and complex process.

What's Been Found So Far

After 10 years of research and field work, a number of instructive observations can be made about historic mining sites located within the boundaries of the national parks in Alaska. Several may appear as truisms; they bear repeating nonetheless. Simply put, there are a lot of mining sites to consider, they demonstrate a wide range of site types, they are often complex and well-preserved, and they present bothersome questions.

First, there is a significant number and a wide range of well-preserved historic mining sites; 178 placer mining sites have been recorded. Most are complex sites involving cabins or tent frames, equipment, and significant landscape modifications. In some of the placer areas, mining-related structures, artifacts, and associated ground disturbances were so extensive that site boundaries were difficult to identify. Unusually dense concentrations of features—often centered on cabin clusters—became discrete sites during the earlier years of the program. Items of interest not directly associated with these sites were noted as isolates. An expedient at the time, this approach has subsequently been of great value in determining larger

patterns of land use and the associations between sites.

Eighty-five lode mining sites were identified. While many contained little more than a short adit and a moldering cabin consistent with 20th-century exploration and initial development practices, others were much more complex. One quarter of the sites contained mill buildings and equipment. These sites are in addition to the better known mines, which had been examined by others, earlier or under different programs. For instance, in Wrangell-St. Elias, the Nabesna gold mine was placed on the National Register in 1979. The spectacular Kennecott copper mining complex was declared a National Historic Landmark in 1987 and was documented for the Historic American Engineering Record in 1985-86.

Placer mining sites in the Alaska national parks frequently contain a wide range of features: cabins and tent frames, dams and ditches, pipelines and flumes, sluices and tailings. Many sites encompass extensive, often elaborate hand-stacked stone walls and spoil piles. Lode mining sites typically break down into two distinct types: habitation and support or processing structures at a lower altitude, and the mines and their associated structures at higher elevations where the mineralization is exposed. A number of smaller mills were identified which employed gravity, cyanide and flotation processes to recover copper, antimony or gold. Other sites were as much home as mine. Flower and vegetable gardens were lovingly maintained at mines in several parks and their patterns may still be seen on the land. In the remoter areas, a surprising number of sites contain small artifacts, domestic items, and tools. One site high in a glacial cirque yielded a whale bone corset and women's button shoes.

Remote mining sites often contain a wealth of small artifacts not usually found in more accessible areas. The interior of a small bunkhouse defines major aspects of the social life of a hard rock miner in an isolated mining camp in1930s. NPS photo.

Many of the sites are unusually complete and multidimensional. The potential for elaborate lode mining sites was understood at the start of the program. Complex placer mining sites were more surprising. Many of the sites first recorded as discrete entities have proven, upon subsequent consideration, to be interconnected and interrelated. Some placer streams can be legitimately discussed as linear sites extending along a drainage for five, sometimes 10, miles or more.

Placer areas can demonstrate depth in the sense that successive periods of mining and sequential exploitative techniques can be discerned on the ground. Marginal areas of a larger placer stream will still exhibit evidence of early prospecting and hand mining methods. The more productive areas might demonstrate the operational sequence of hydraulic mining. For example, older diversion dams are partially exposed under relatively younger tailings piles revealing a discernible sequence. Bed rock trenches and boulder piles mark where the water once ran as the stream was shifted back and forth across a valley in order to expose and work the paystreak. Drift pits and collapsing tunnels in the gravel banks and hillsides demonstrate the search for buried channels.

Politics, economics, and geography have protected many sites from destruction by subsequent mining development or scavenging. Many of the mining areas became economically marginal after the initial period of exploration and development. Where it was viable, subsequent mining efforts were conducted in a manner which did not fully obliterate evidence of previous operations. The scrap drives of World War II did little serious damage to Alaskan mining sites. It simply was not practical or profitable to recover scrap iron and other metals. The prohibition on gold mining during the war also aided the preservation of sites, as did the general inflation and the relative decrease in the value of gold during the immediate post-war era.

Making Sense of What's Been Found

The need to make sense of what was being recorded in the field was immediate. Area-specific historic research—locally referred to as drainage histories—were compiled ahead of the fieldwork to the extent possible. These brief studies identified historic mining operations known in a given area, suggested the potential complexity of the sites from archival sources, and made preliminary assessments of the area's significance. Considerable attention was given to descriptions of mining-related features associated with the area in order to provide a basis for assessing the integrity of sites as they were found. A more general historic overview, *Golden Places*, was written by William R. Hunt, a long-time Alaska historian. Several historic resource studies were either available to the project or were researched and written at the same time. Especially useful were Hunt's *Mountain Wildemess* written for Wrangell-St. Elias, William Brown's *Gaunt Beauty ... Tenuous Life*, written for Gates of the Arctic, and his *A History of the Denali-Mount McKinley Region, Alaska*. It is the rare historic resource study for an Alaska national park that does not reference historic mining.

No discussion of historic mining in Alaska is complete without reference to the Kennecott National Historic Landmark. The gravity concentrator, a 14-story structure operated from 1912 to 1938, is now a part of Wrangell-St. Elias National Park and Preserve. NPS photo.

Field recording went hand-in-hand with the evaluation and management of sites and was sometimes driven by immediate needs. Assessments of the particular value of a given site and the need to make comparative and qualitative judgments between sites did not always happen leisurely. Miners wanted to exercise their legitimate rights to develop their mining claims. The National Park Service had sometimes contradictory goals in the management of abandoned mine lands; it understandably wanted to mitigate the negative effects of mining on the environment at the same time it strove to preserve and protect historic sites. Visitors wanted, and were increasingly gaining, access to more and more of the parks, raising protection issues for the resources and the public. The pressures present opportunities for visitor education and the interpretation of mining history in the parks.

The complex nature of the sites that were being recorded, and the often conflicting demands placed on them, particularly in the placer mining areas, quickly forced the project beyond inventory and into analysis. Different types of placer mining were associated with distinctive artifacts and features. Landscape modifications, particularly the form and location of tailings and spoil piles, assumed a degree of importance that few had anticipated when the program began. National Park Service historians developed a site typology describing characteristics and diagnostic artifacts and landforms.

Nominations and determinations of eligibility for the National Register have been useful tools in the evaluation and management of historic mining resources. Districts are the essential level of evaluation; little else can do justice to the scale and scope of many of the Alaskan mining sites. In Denali National Park and Preserve, the Old Eureka-Kantishna Historic District extends over six miles of stream bed and includes the site of a gold rush community and extensive evidence of early placer mining activities. The Coal Creek Mining District in Yukon-Charley Rivers National Preserve covers 350 acres along seven miles of Coal Creek. The district includes, among other things, a gold dredge, several mining camps, a road house, and a sophisticated water supply system.

In Wrangell-St. Elias National Park and Preserve, the Gold Hill Historic Mining District includes 21,725 acres and addresses 361 contributing buildings, sites, structures, and objects. The Gold Hill National Register nomination reflects the direction current projects are taking in Alaska. The initial recording of sites in the Gold Hill area was performed by the region-based Inventory and Monitoring Program with assistance from the park. The nomination was prepared by the park with support from regional staff. As a companion piece to the nomination, Geoffrey Bleakley, a historian at Wrangell-St. Elias, wrote *A History of the Chisana Mining District, Alaska, 1890-1990*, a narrative history of the Gold Hill area directed toward park management and the knowledgeable public. More important, the nomination was one element of a larger cultural landscape study that addresses the Gold Hill area as a whole, a significant step beyond considering it as a complex of interconnected sites. Cultural landscape inventories and reports go beyond describing sites and establishing significance; they allow, even require, recommendations for managing historic resources.

Into the Future

The regionally-based Mining Inventory and Monitoring Program no longer exists. It has served its purpose and leaves a body of useful information about historic mining and mining-related sites in the Alaskan parks. Several people involved with the project have moved on to cultural resource management positions with the various parks ensuring that there are staff available who are aware of and able to use this information. Approaches to the recording and evaluation of mining sites derived from, or developed parallel to, the program continue to be useful. The emphasis on larger units of analysis, as currently expressed through cultural landscape studies, is particularly useful. Wrangell-St. Elias is currently conducting two such studies: one in the remote Bremner mining district and a second at the Kennecott National Historic Landmark, an increasingly popular visitor destination. Not everything related to mining in the parks has been found. However, there are tools at hand to make sense of the historic mining sites that may be discovered in the future. Shifting the focus from a regional basis to the individual parks encourages closer attention to the history of the area. As important, perhaps more so, it provides greater opportunities to make these historic sites available to visitors and to share the knowledge gained over the last decade with the widest possible audience. Again, no small task.

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